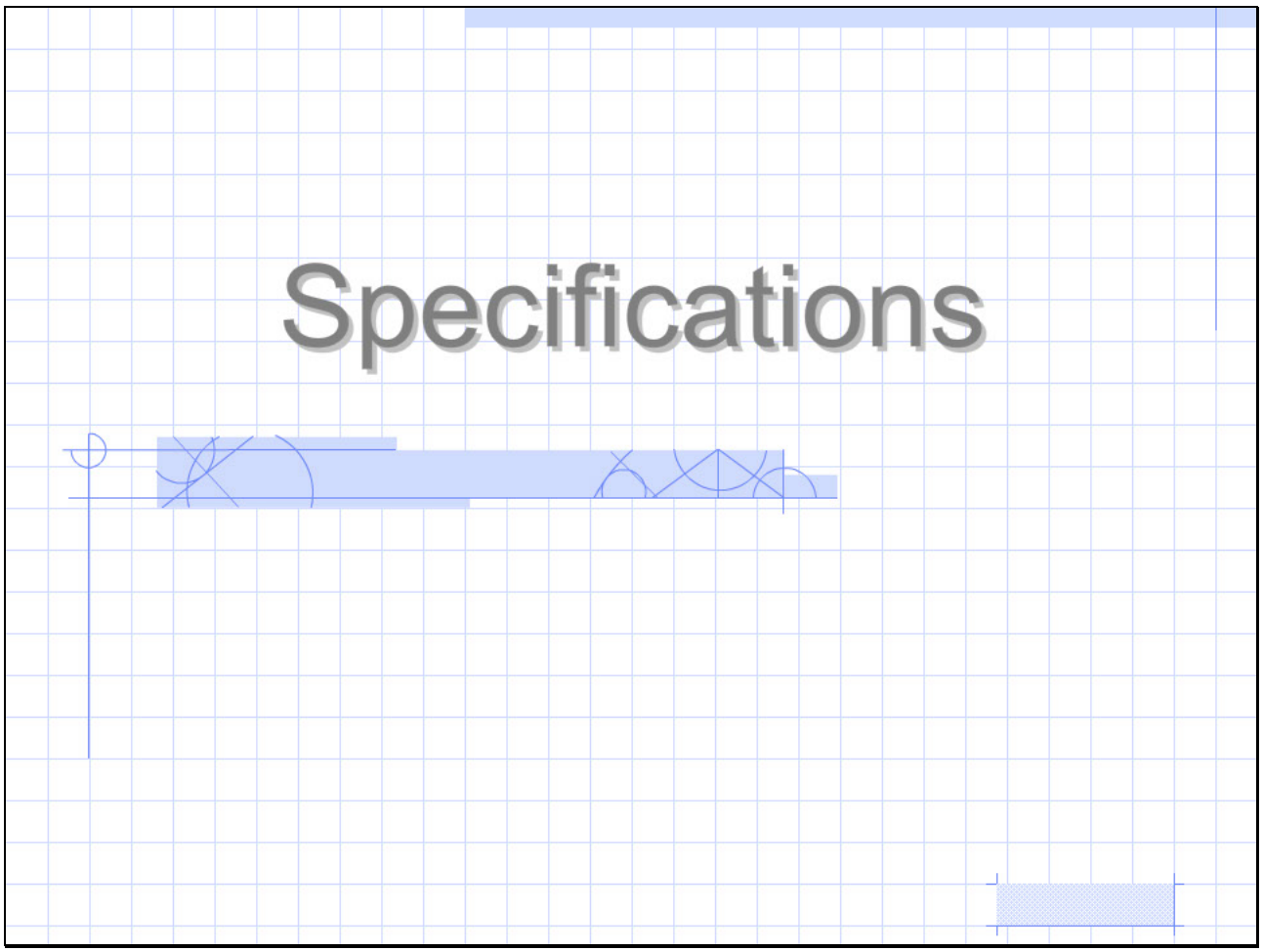
**Slide 1 - Specifications**

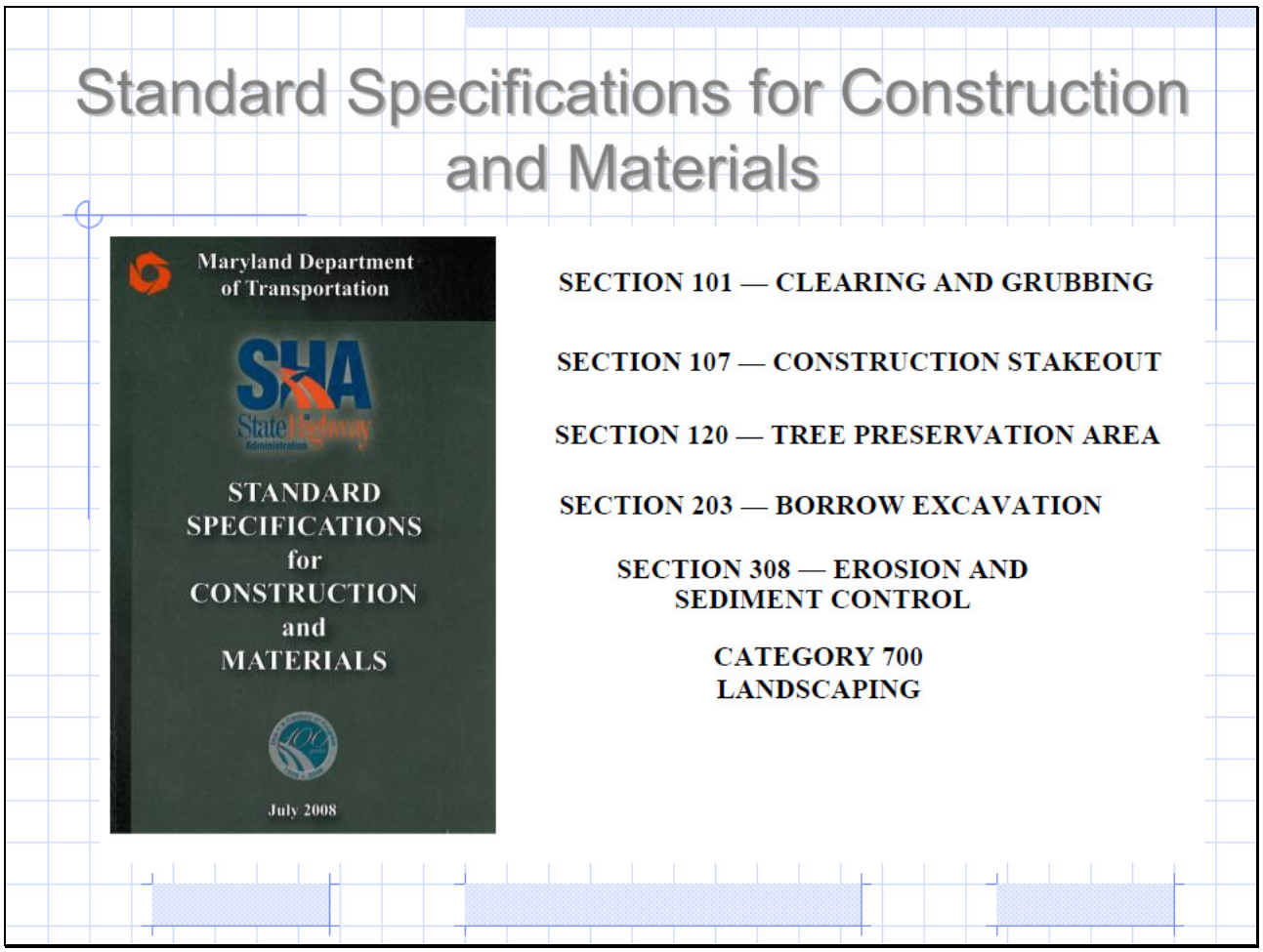



**Slide notes**

Now lets take a closer look at the Specifications that govern how SHA projects are to be constructed and how they relate to the environment. Take a moment to read the information presented as it has been taken directly from the 2008 Maryland specifications.

**Notes**

### Slide 2 - Specification sections




### Slide notes

While the focus of this training is on Section 308, Erosion and Sediment control, there are several sections that relate to the environmental issues discussed in this course

101, Clearing and Grubbing.

107, Construction Stakeout.

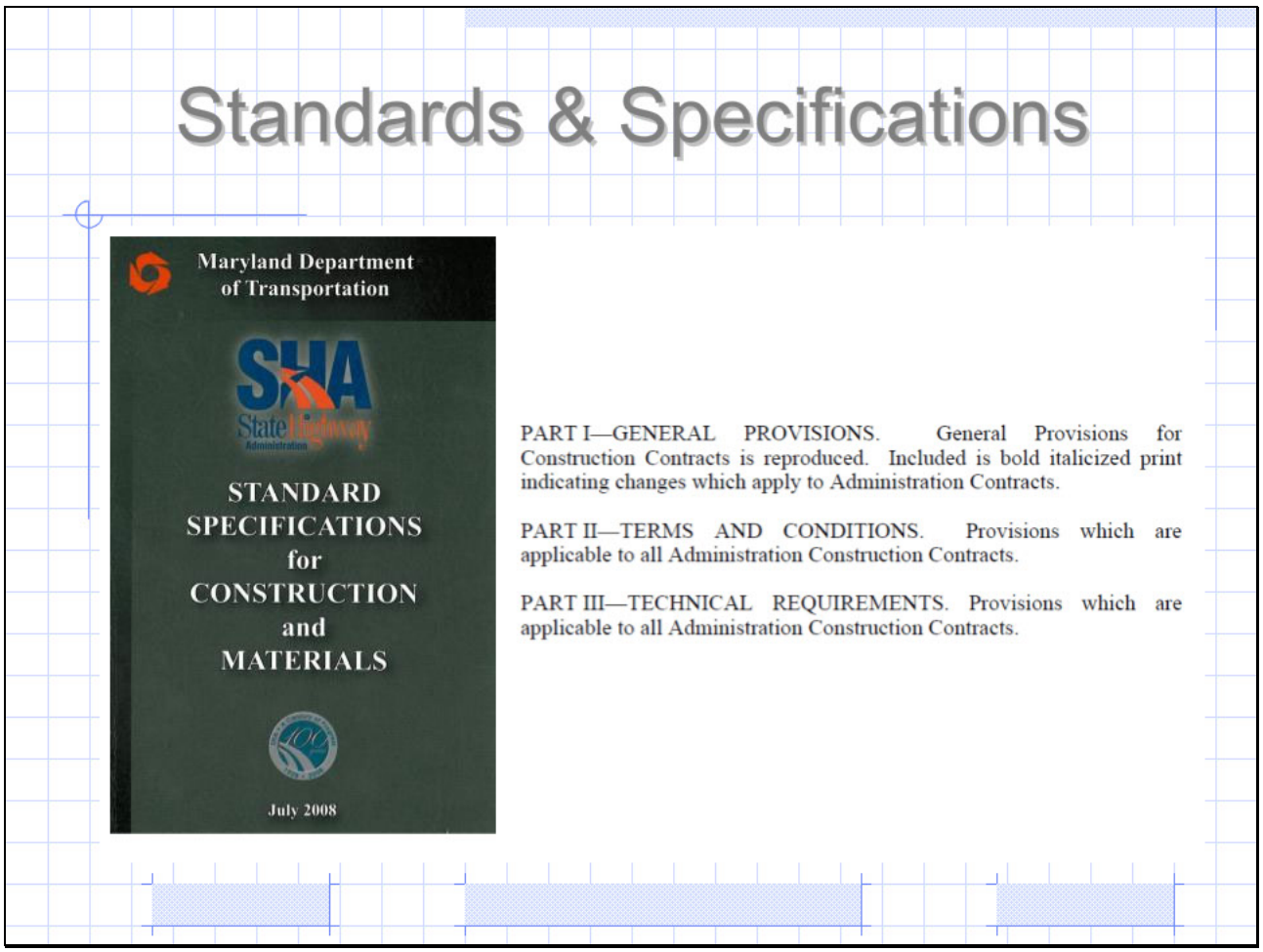
120, Tree Preservation Area.

203, Borrow Excavation

And the 700 sections related to landscaping that will be covered in a separate module of the training.

### Notes

### Slide 3 - Specification sections



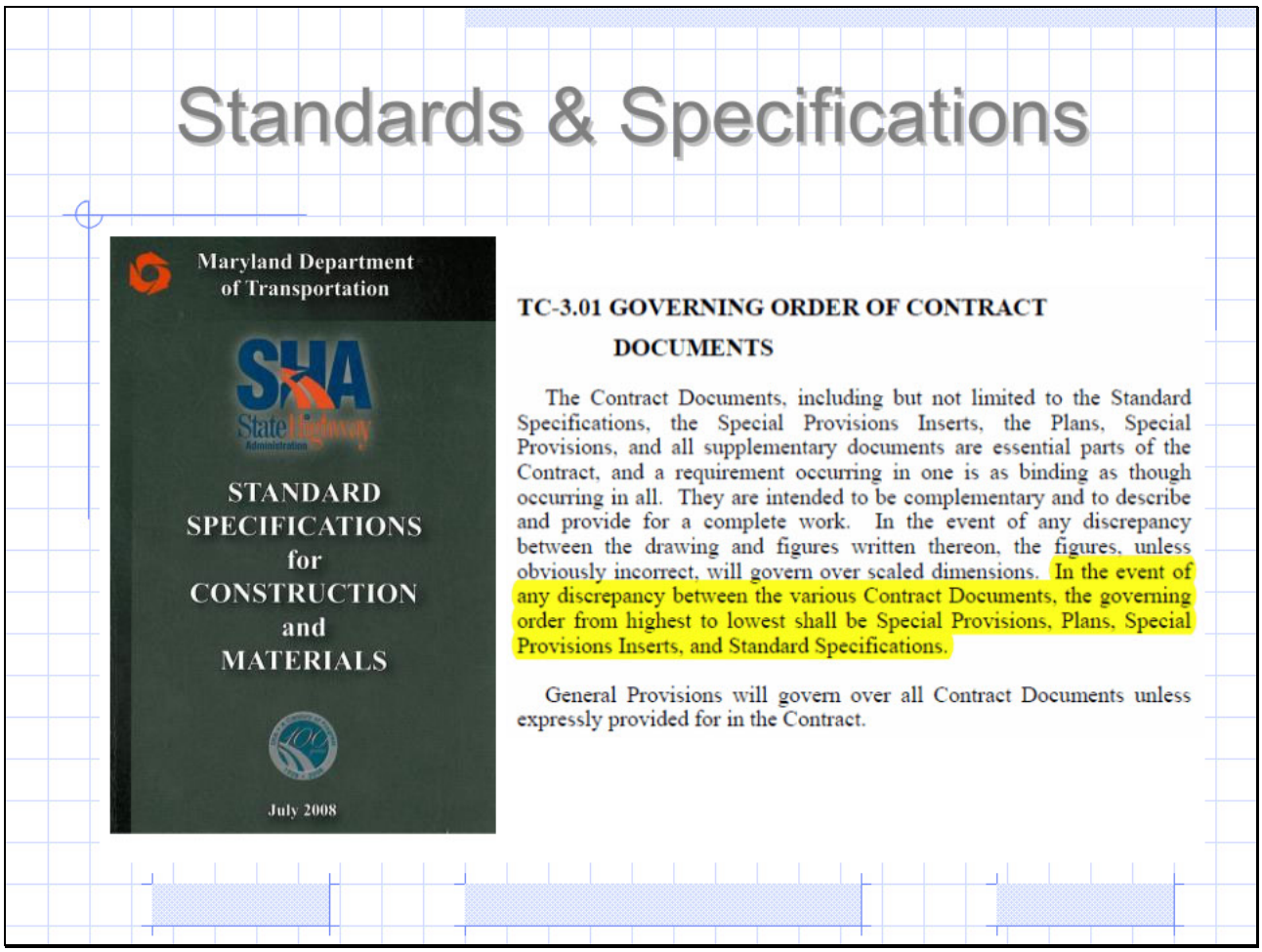

### Slide notes

The specification book is divided into three parts.

Keep in mind that because this book is designed to be a baseline on how state highway projects are constructed and managed, other contract documents, such as the Plans and Special Provisions may override the specifications.

### Notes

### Slide 4 - Governing Order

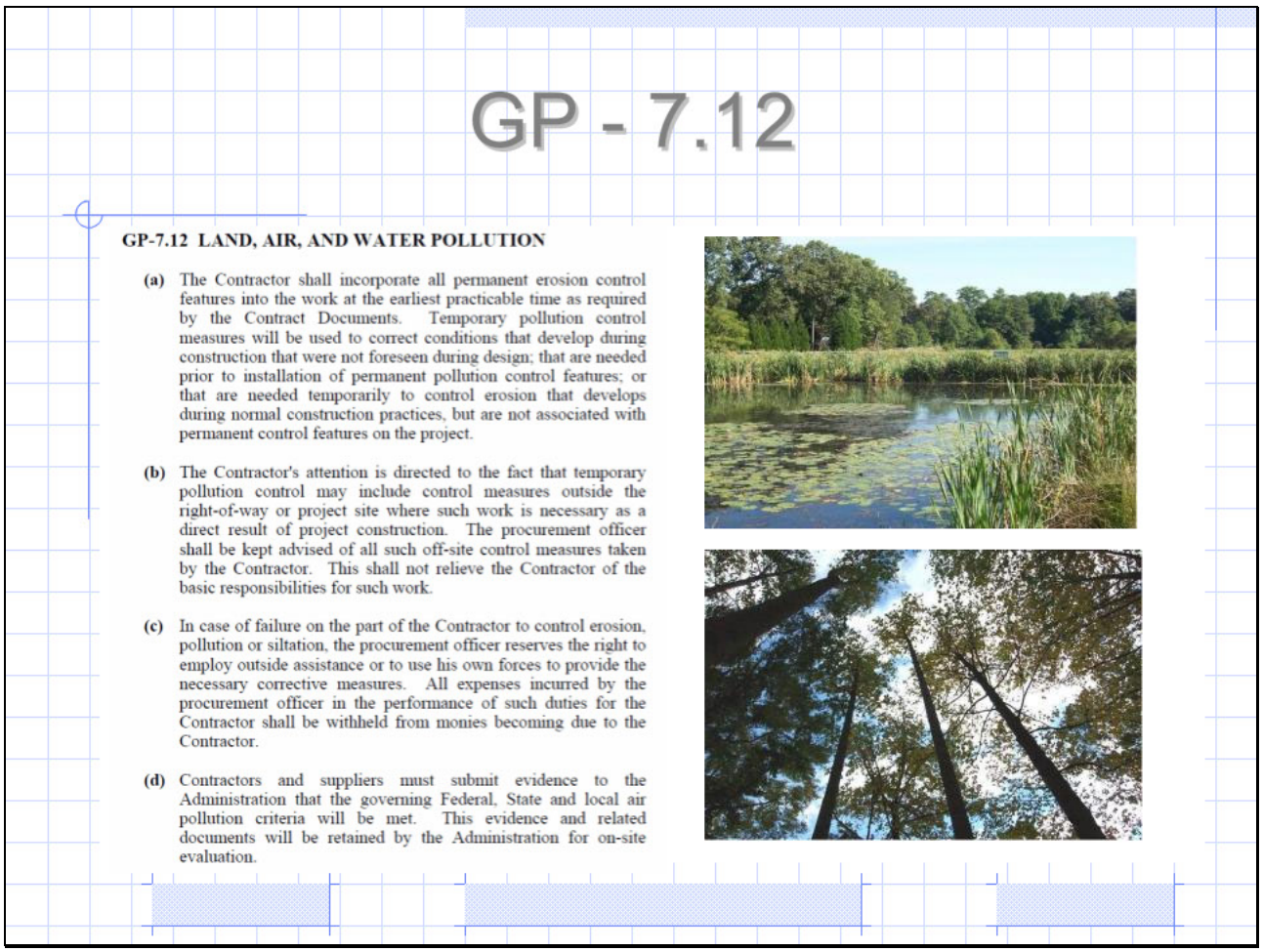



### Slide notes

It is important to understand the governing order of the contract documents. The specifications are the foundation that all of the other contract documents are build upon. From lowest to highest are the specifications, Special provision inserts, the plans, and finally the special provisions included within the IFB, or invitation for bids (the contract). The permits are a part of the IFB and therefore a part of the highest governing document. The general Provisions override all other contract documents unless specifically stated otherwise in the contract

### Notes

## Slide 5 - GP - 7.12

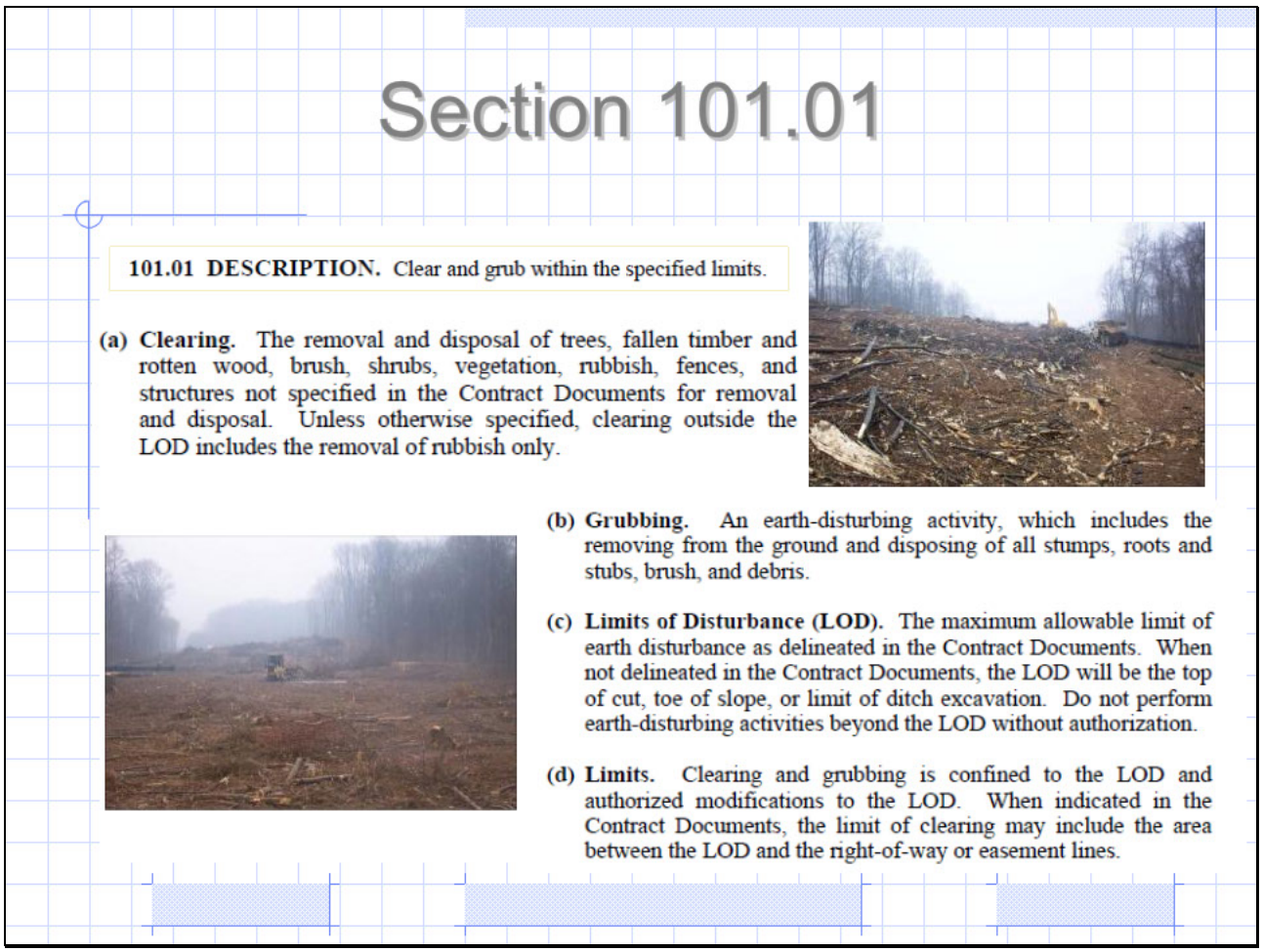



### Slide notes

General Provision 7.12 gives guidance that all activities shall be in conformance with state and federal regulations related to environmental protection. Remember, the General Provisions override all other contract documents unless specifically stated otherwise in the contract

### Notes

### Slide 6 - Section 101.01




### Slide notes

Section 101.01 covers the clearing and grubbing operations.

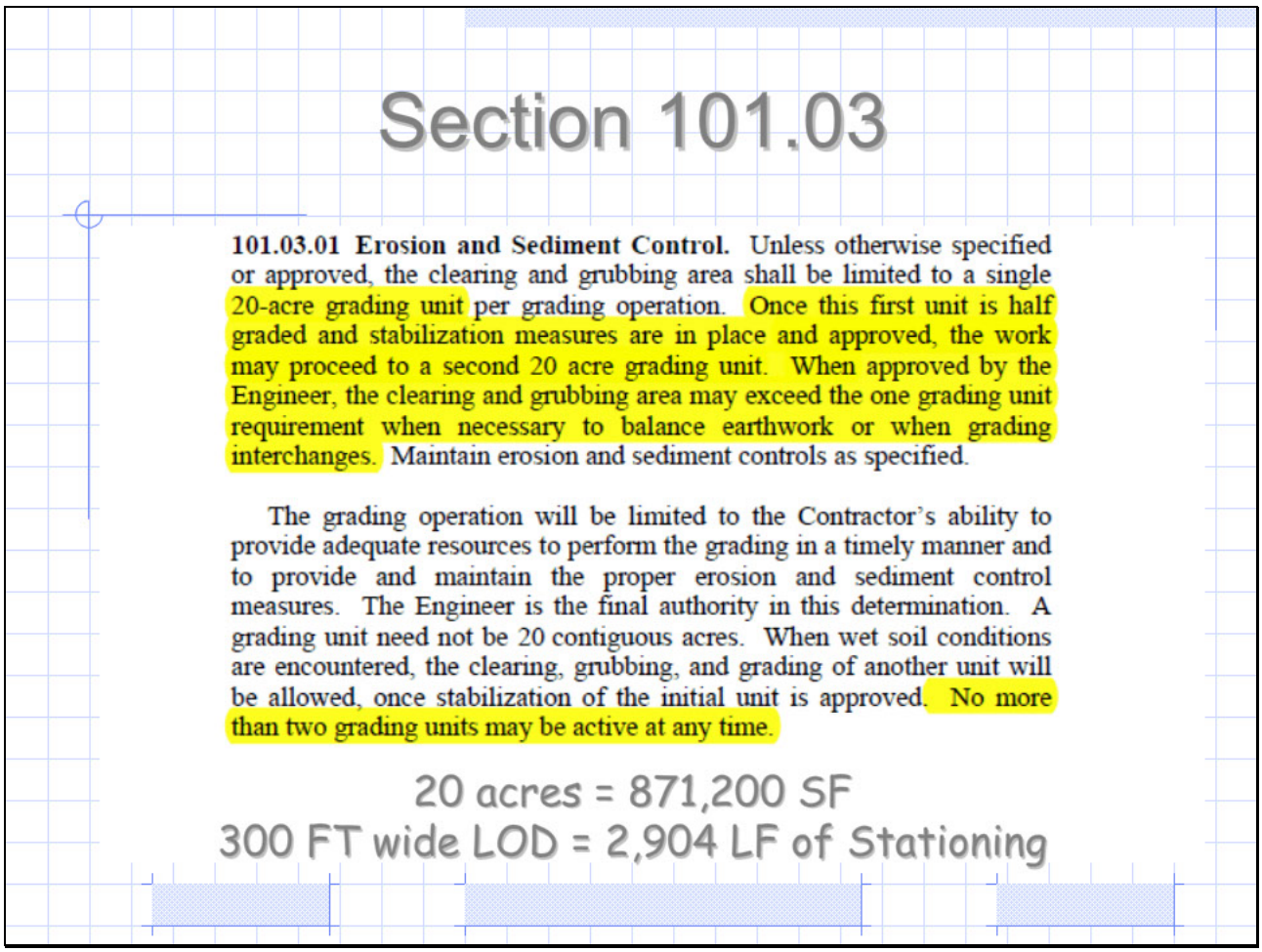
Clearing and grubbing, although inclusive in the same item of work are two distinct types of operation.

Clearing is the cutting of trees and vegetation on a site but the root mass remains intact in the ground. Be careful that when using heavy equipment to clear a site that the operation does not create to much disturbance as to be considered grubbing.

Grubbing a site is the next step in the operation and involves removing the root mass, this is a major disturbance and the area is now prone to producing heavily sediment laden runoff.

### Notes

**Slide 7 - Section 101.03**




**Slide notes**

The Clearing & grubbing area shall be limited to a 20 acre grading unit per grading operation.

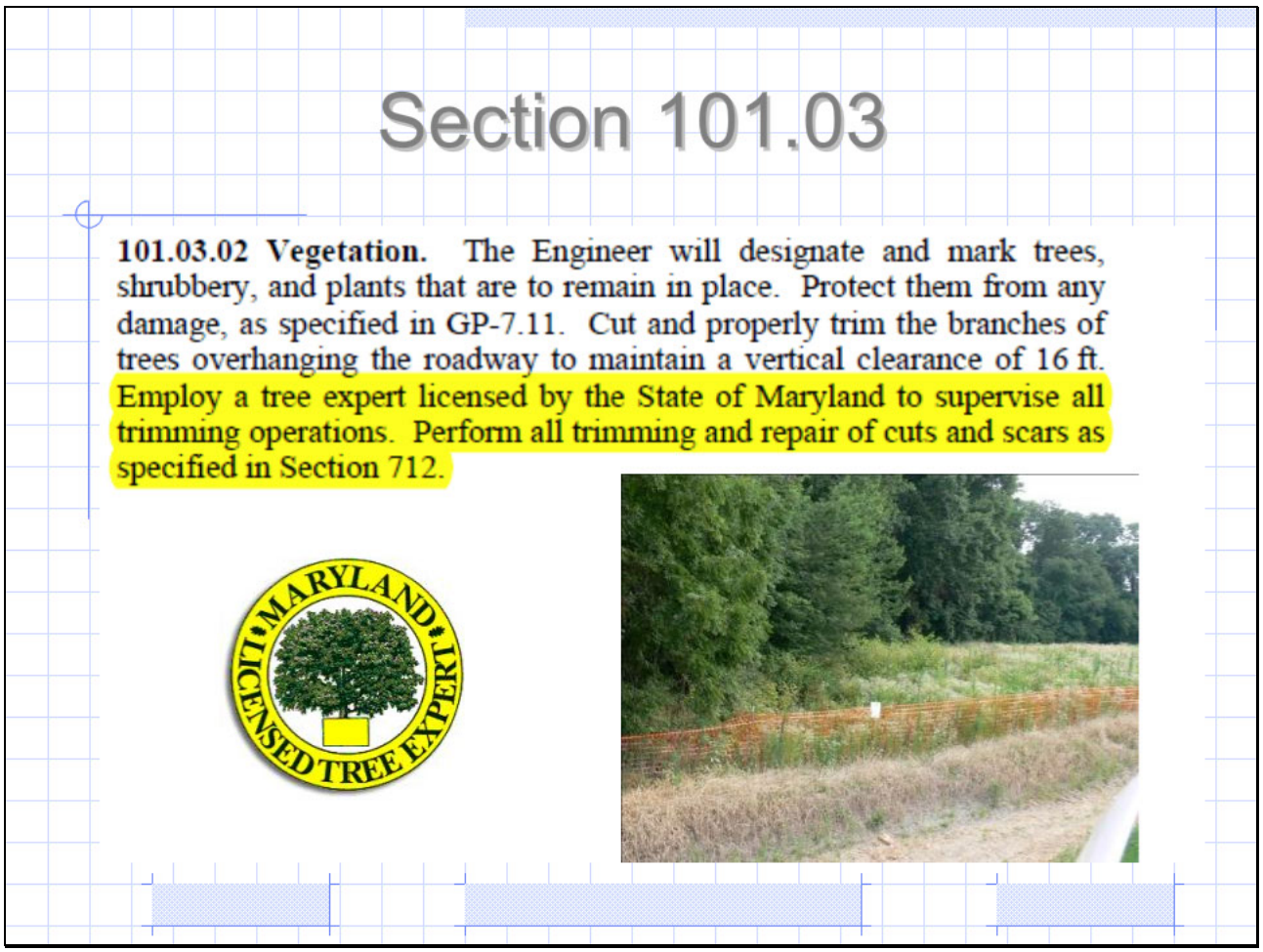
Once this 1st unit is half graded the contractor will be allowed to proceed with the 2nd 20 acre grading unit.

A contractor may be allowed to exceed the 20 acre grading unit requirement to balance earth work, or when grading interchanges. A balance earthwork project will have an earthwork summary sheet in the plans.

An example of a 20 Acre area is shown, A 300 foot wide LOD could only extend 2900 feet before the grade unit is exceeded, that's just a little over a half mile.

**Notes**

**Slide 8 - Section 101.03**




**Slide notes**

Any trees that are to be protected during the construction process are to be marked and protected from damage that could occur from nearby construction. A licensed tree expert must be employed to supervise or perform any necessary trimming operations

**Notes**

**Slide 9 - Section 107**

# Section 107

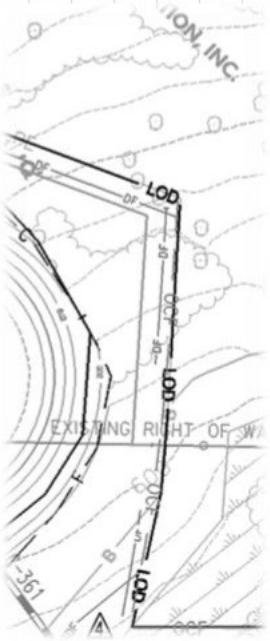
**107.01 DESCRIPTION.** Furnish, place, and maintain construction layout stakes. Demarcate (flag) the Limit of Disturbance (LOD), and protected resources including, wetlands, wetland buffers, waters of the United States, floodplains, and tree preservation areas.

The LOD is defined as the maximum allowable limit of earth disturbance as delineated in the Contract Documents. When not delineated in the Contract Documents, the LOD will be the top of cut, toe of slope, or limit of ditch excavation.

No clearing or earth disturbance activity may begin until the LOD and all protected resources are demarcated as specified.

**107.02 MATERIALS.** Refer to 107.03.09.

**107.03.09 Demarcation.** Perform all demarcation as specified or directed. Demarcate wetlands using the Administration's standard 1-1/2 in. pink and white striped vinyl flagging with "SHA WETLAND" printed in blue letters. Demarcate the LOD and other applicable protected resources using a minimum 2-mil vinyl that is 1-1/2 inch wide with 7/8 in. letters, and locate as directed.

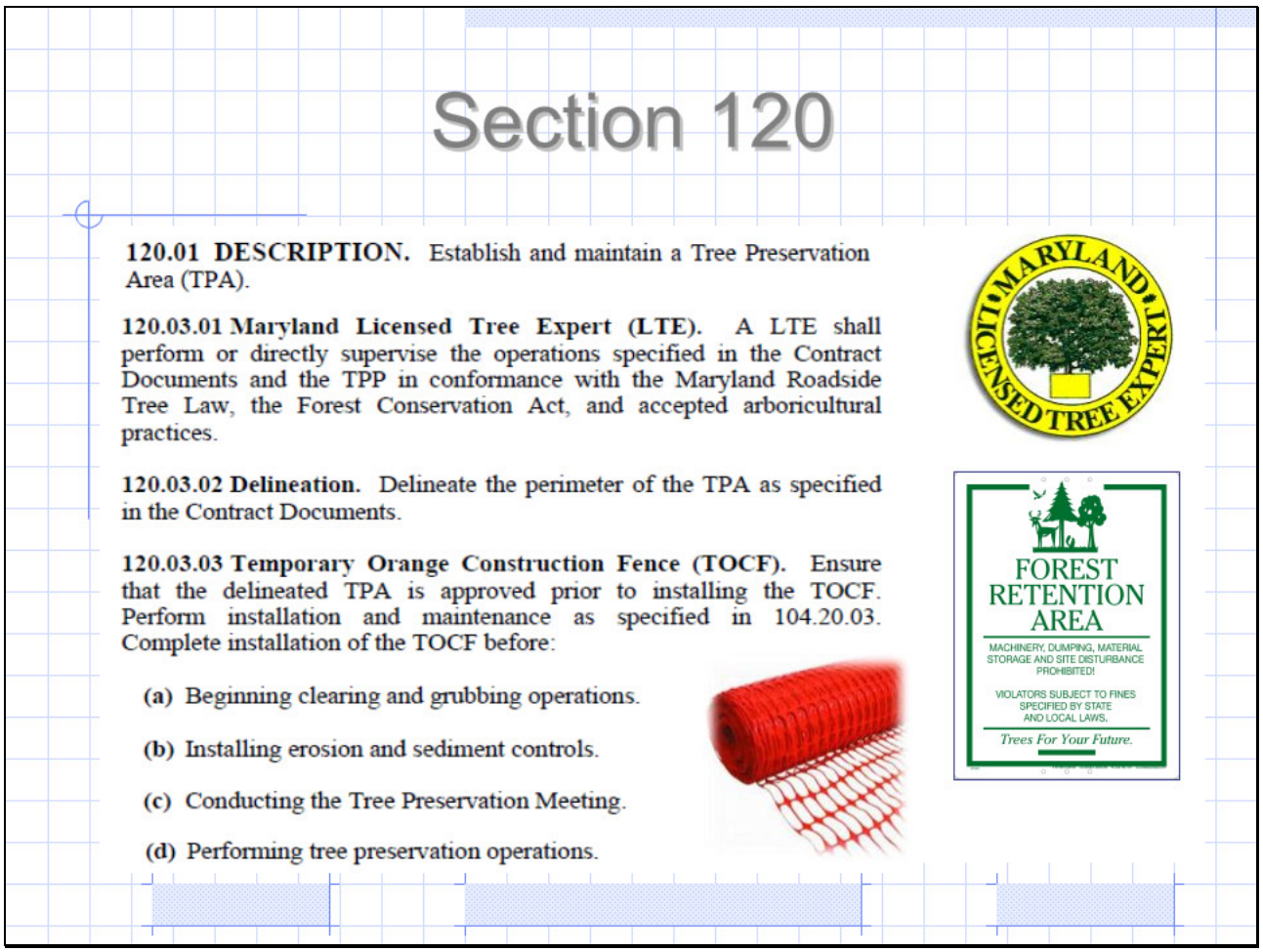



**Slide notes**

Limits of disturbance along with any other environmental resources must be demarcated prior to clearing or earth disturbance. Failing to mark these areas as described in the specifications and as identified on the plans places a project at risk of being found in non-compliance.

**Notes**

**Slide 10 - Section 120**

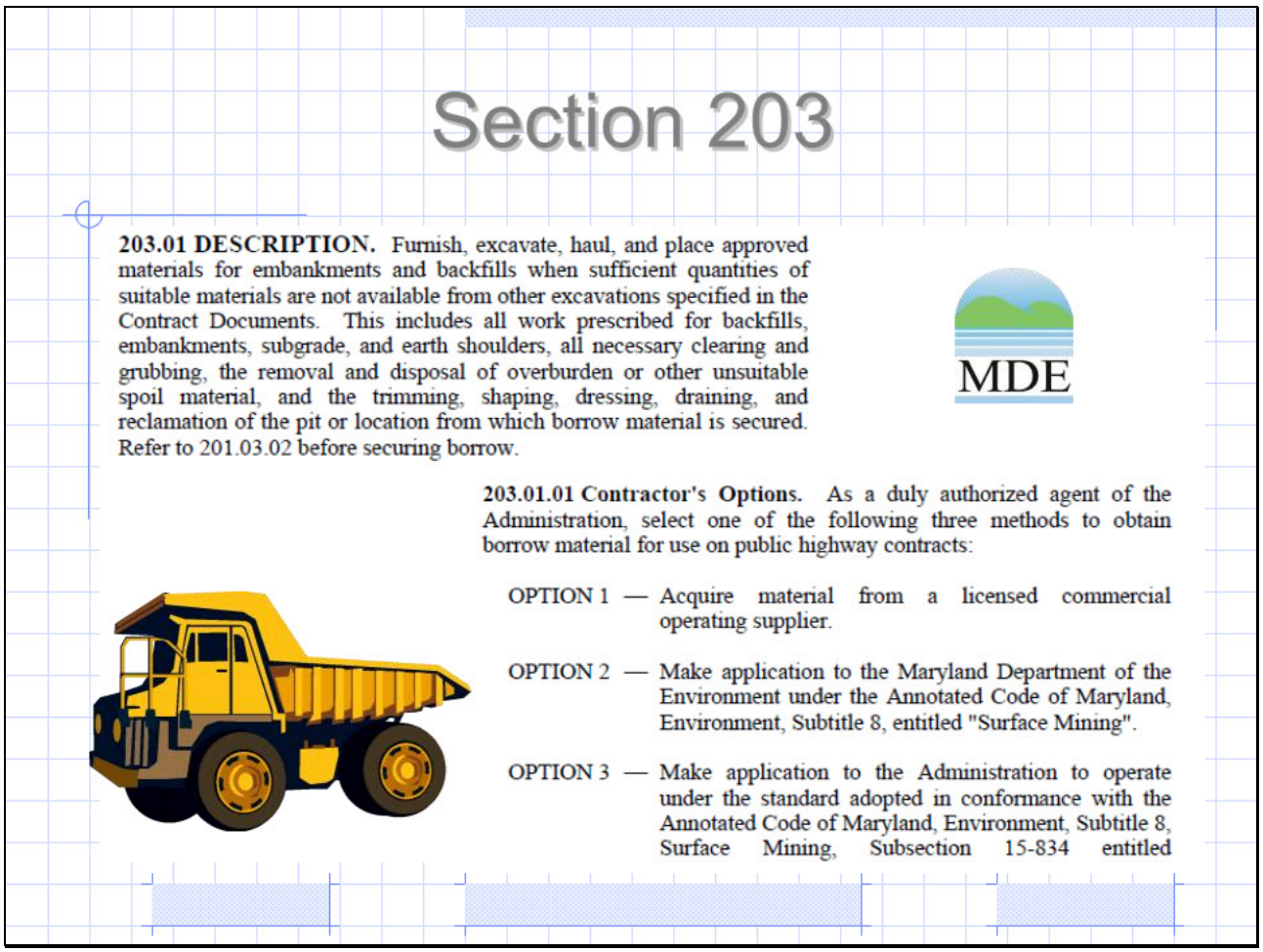



**Slide notes**

Tree preservation areas must be clearly marked prior to activity on the project; this is to ensure that the areas are not mistakenly cut as a part of the clearing operation. Temporary orange construction fence is typically utilized for this delineation.

**Notes**

**Slide 11 - Section 203**




**Slide notes**

Earth disturbance in the state of Maryland is considered surface mining by M.D.E., therefore when a contractor is bringing excavated material (borrow) to a construction project it must be coming from a mine somewhere in the state, this could also include a local farmer that may be selling the material from their land.

When a contractor is to bring Material to an S.H.A. project site they must inform the Administration of the material's source location and what option they are selecting to work under.

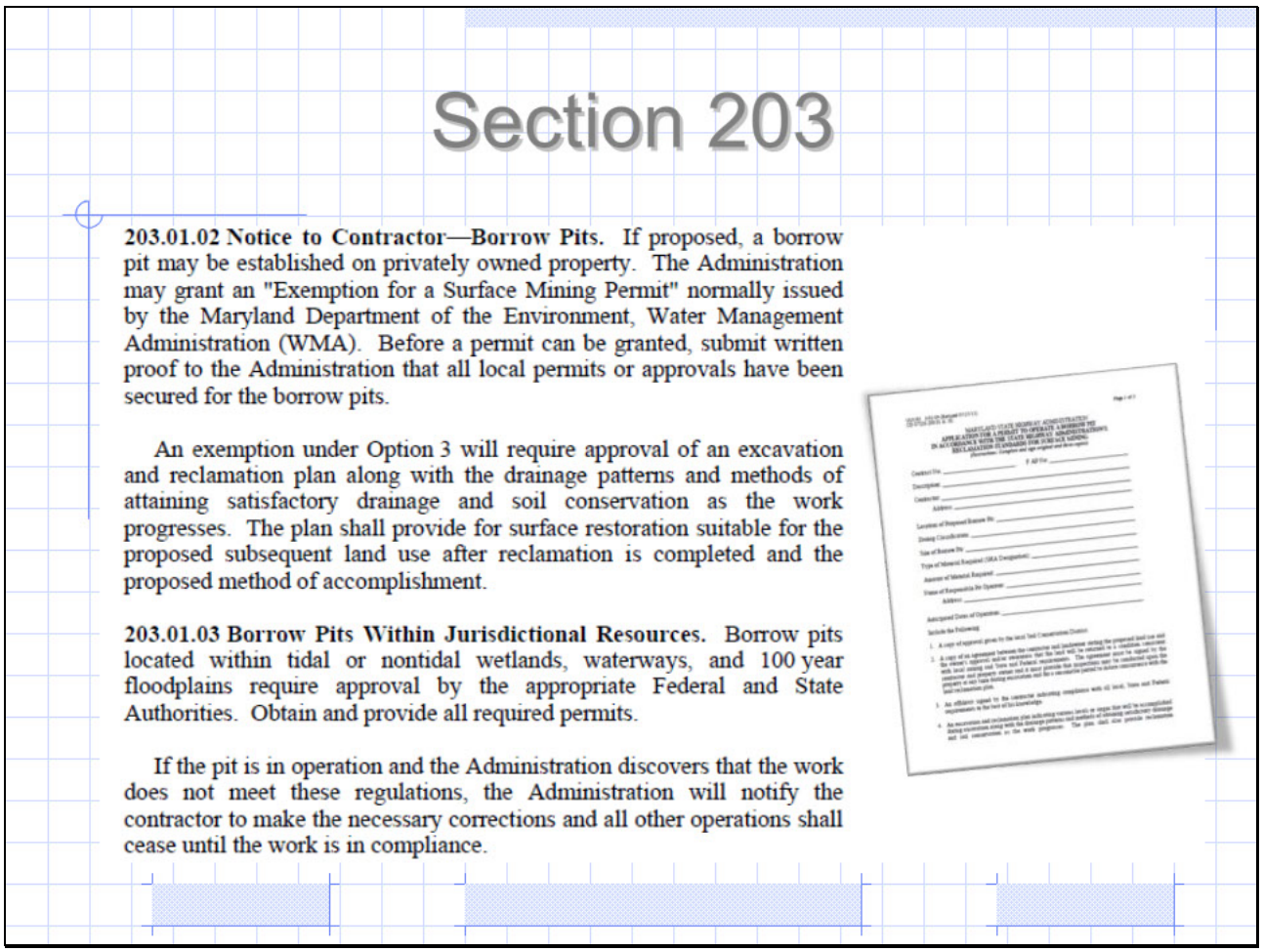
Option 1 would be when a contractor purchases the material from a licensed operator such as a quarry.

With option 2 the contractor would submit an application directly to M.D.E to operate a mine and supply the material to S.H.A.

Option 3 is selected when a contractor would like to operate a mine to supply material to an S.H.A. project without going through the M.D.E. application process. This is material excavated that is not already included in an approved permitted plan of some type. When option 3 is chosen by the contractor the material can only be utilized on that specific administration project and cannot be utilize elsewhere or sold privately.

**Notes**

### Slide 12 - Section 203



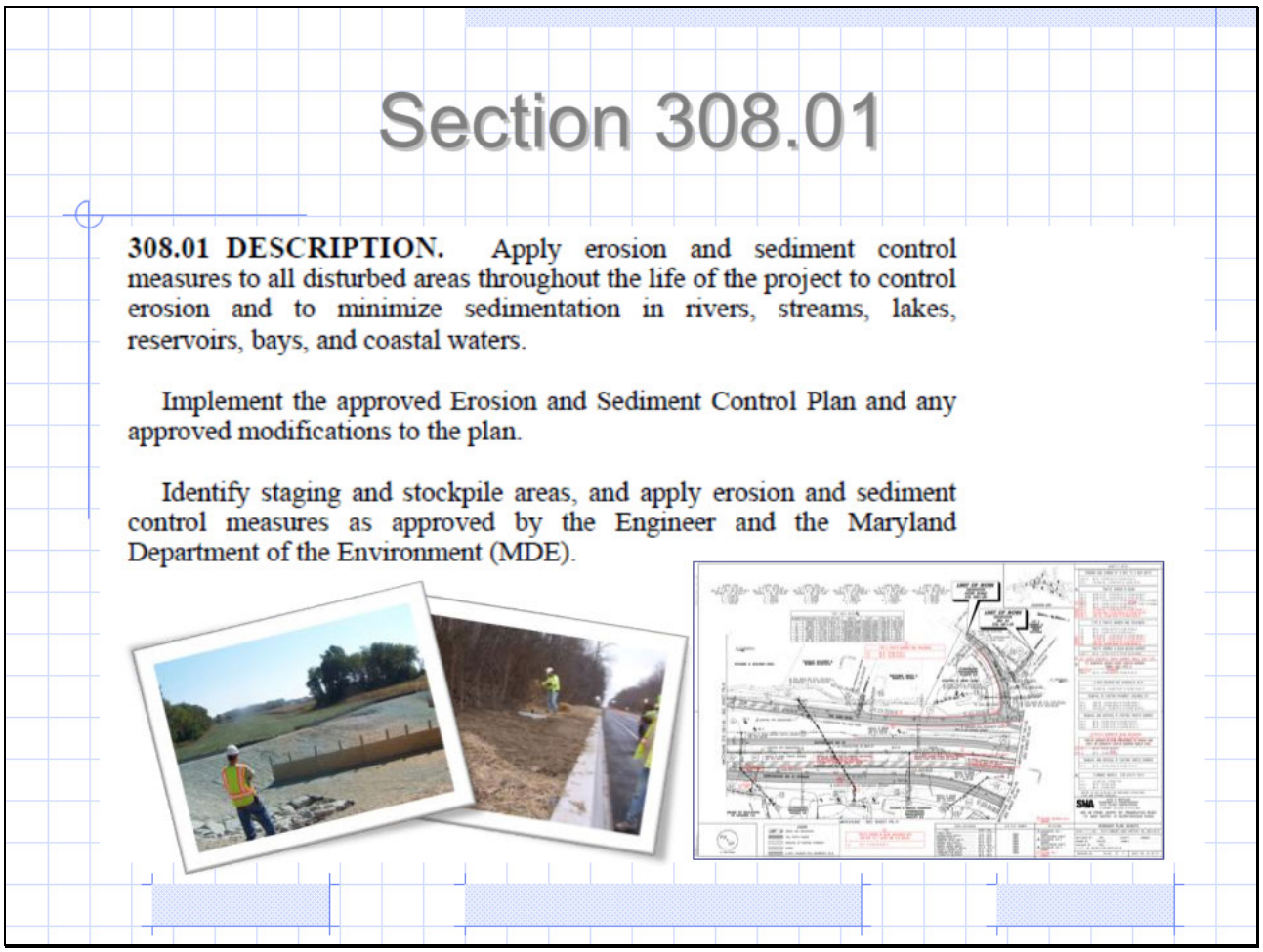

### Slide notes

When the contractor selects to use option 3 an OOC 63 form is utilized for approval.

There is specified information that must be provided by the contractor as stated in the specifications such as a work plan and reclamation plan. This area will be monitored by SHA just as if it were part of the construction site.

### Notes

**Slide 13 - Section 308.01**

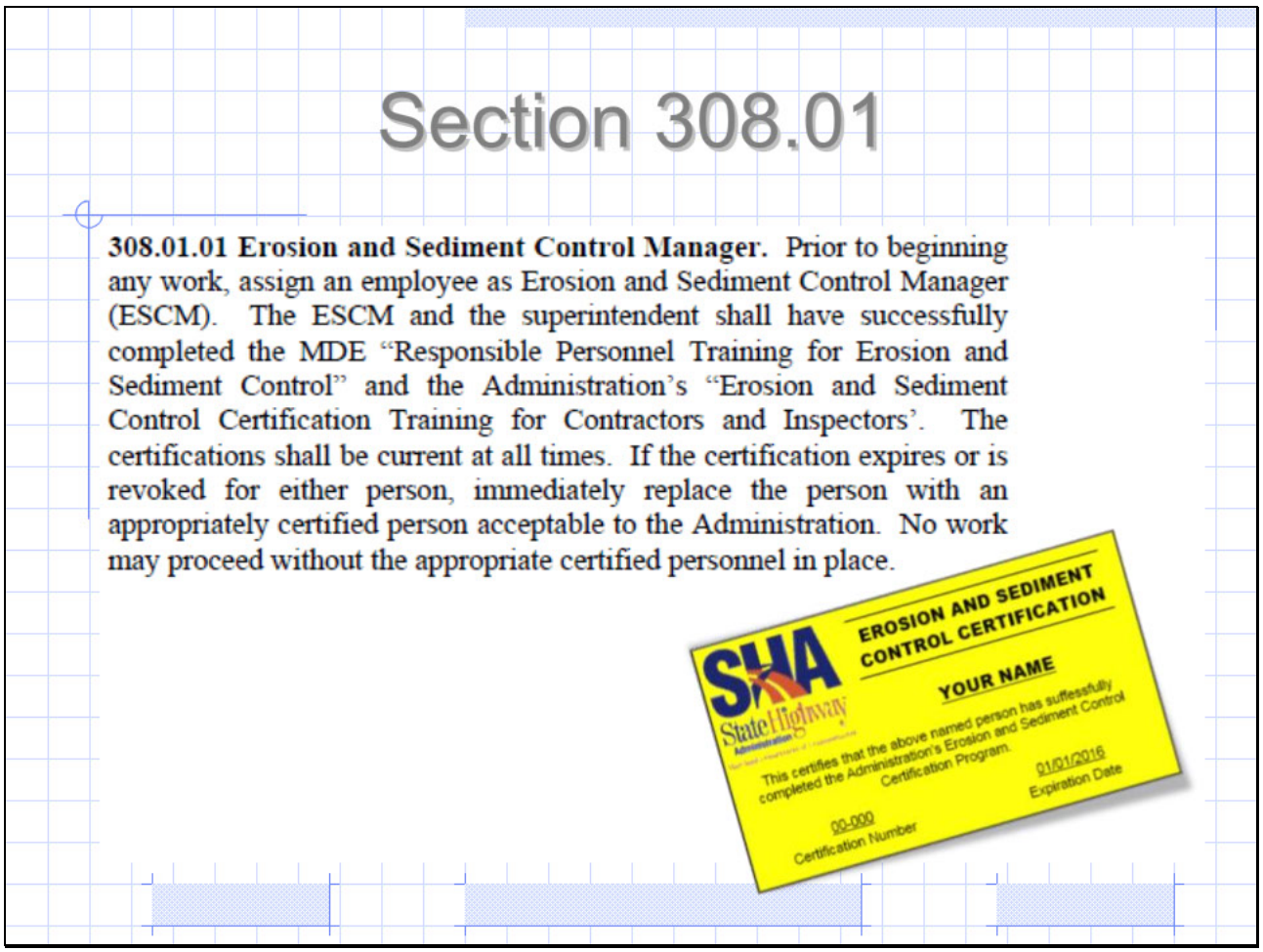



**Slide notes**

The specifications require that erosion and sediment controls be installed and maintained throughout the life of the project. The E and S plan is to be followed as it is a part of the contract documents. Note that stockpile and staging areas are to be identified and approvals are necessary.

**Notes**

**Slide 14 - Section 308.01**

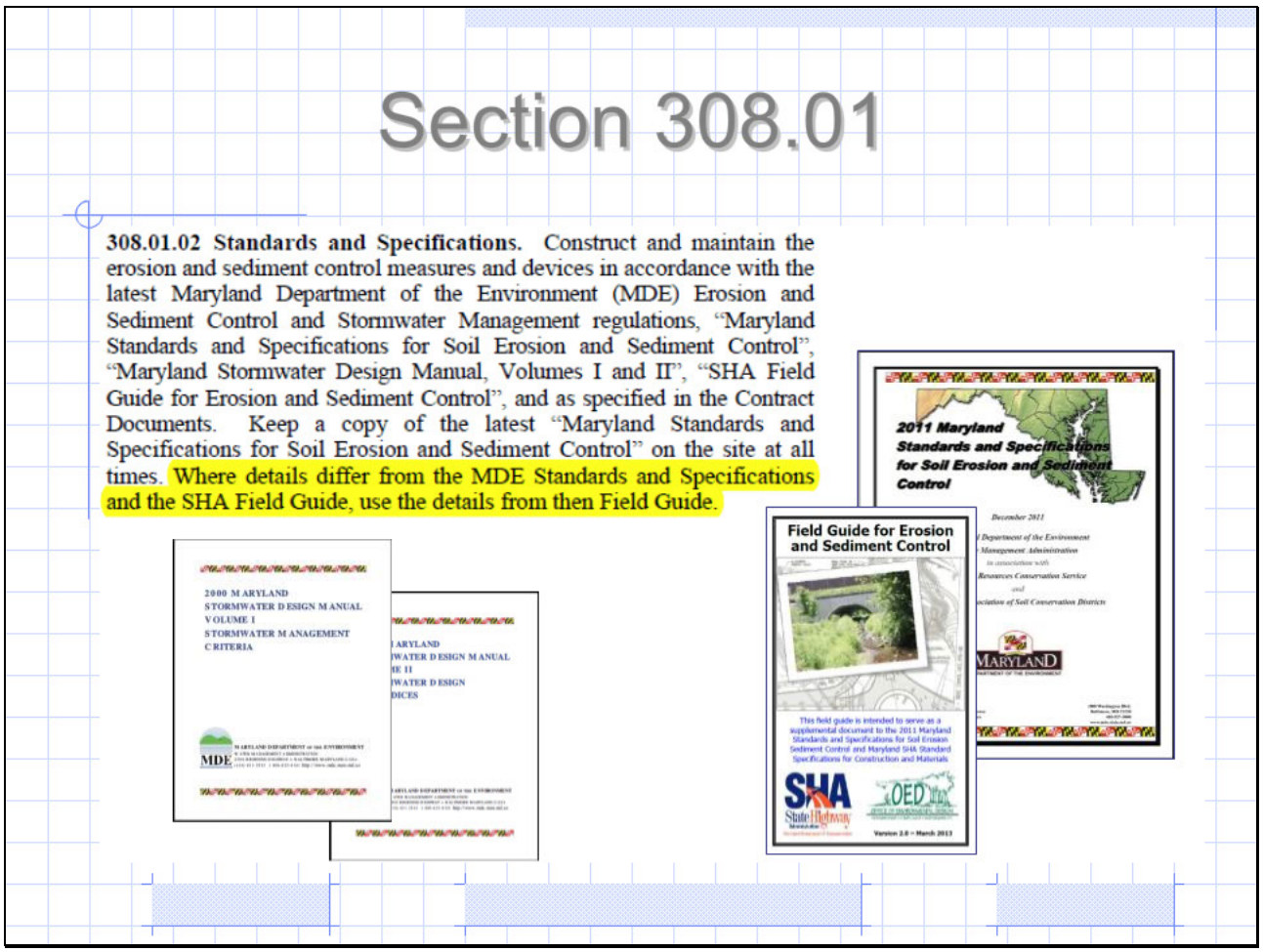



**Slide notes**

Both the Erosion and sediment control manager as well as the superintendent on the project shall have successfully completed the MDE Responsible Personnel Training for E&S Control and the SHA E&S Control Certification, Yellow Card. Individuals without this certification cannot work in these capacities on an SHA project.

**Notes**

**Slide 15 - Section 308.01**

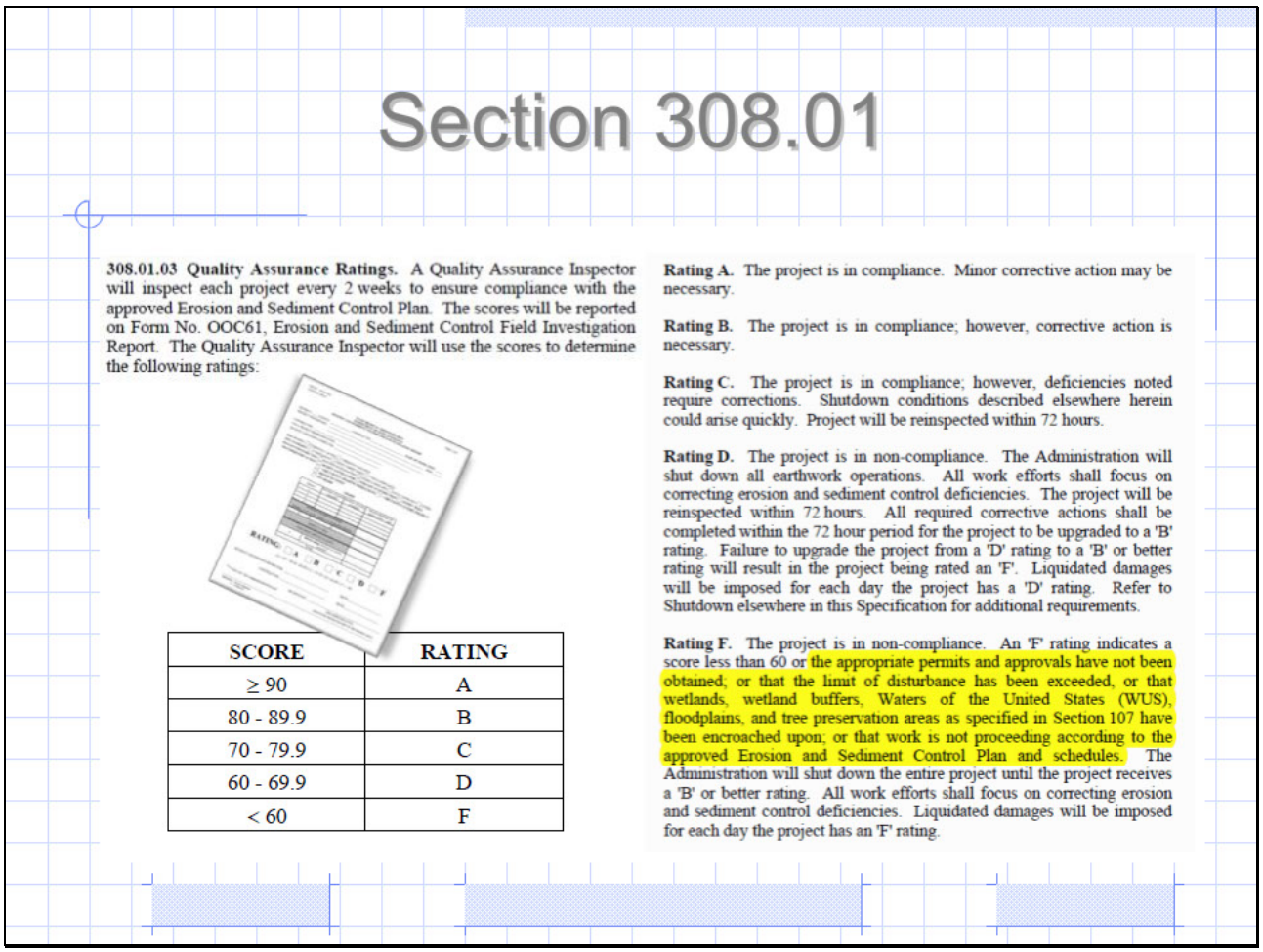



**Slide notes**

Section 308.01 covers the reference documents utilized for installation and maintenance of environmental features or controls. Note that when there is a difference between the MDE specifications and the SHA field guide, the field guide is to be utilized as the governing document. SHA details will always match or exceed MDE specifications.

**Notes**

## Slide 16 - Section 308.01




### Slide notes

The Quality Assurance program has a responsibility to review and grade construction projects to ensure compliance with the approved plans. It is important to understand that there are 3 responsibilities that the contractor must fulfill in order for the project to remain in compliance with the program.

The Contractor must obtain all appropriate permits and approvals; this would be offsite permits such as for stockpiles or waste disposal. The contractor must demarcate the Limits of Disturbances, wetland and wetland buffers, floodplains and tree protection areas as specified in Section 107, and proceed according to the approved E&S Control Plan and schedules.

Projects will be inspected every 2 weeks at a minimum and be given one of the following ratings: (Ae, B, C, D or F)

Work shall proceed according to the approved E&S Control plan and schedules

### Notes

**Slide 17 - Section 308.03**

# Section 308.03

**308.03.01 Contractor Responsibilities.** Prior to beginning any earth disturbing activity, complete the following:

**(a)** Demarcate all wetlands, wetland buffers, floodplains, waters of the United States, tree protection areas, and the Limit of Disturbance (LOD) as specified Section 107.

**(b)** Have all demarcated wetlands, wetland buffers, floodplains, water of the United States, tree protection areas, and LOD inspected and approved by the Engineer.

**(c)** Construct all erosion and sediment control measures in conformance with 308.01.02.

**(d)** Have all control measures inspected and approved by the Engineer.

Ensure that all runoff is directed from disturbed areas to the sediment control measures.

Do not remove any erosion or sediment control measure without the approval of the Engineer and MDE. Refer to GP-7.12 for unforeseen conditions.

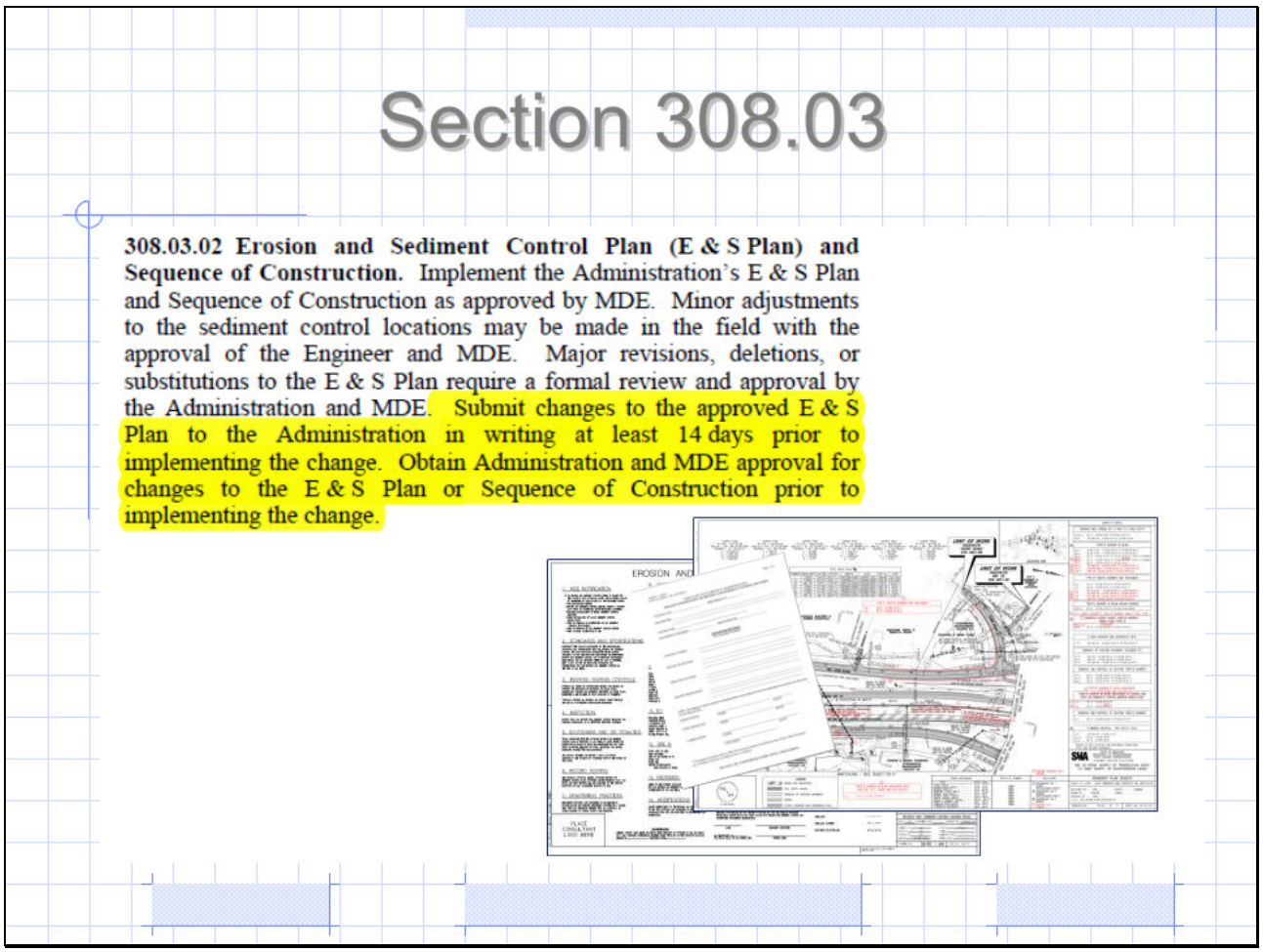
Ensure that dewatering practices do not cause any visible change to stream clarity.


**Slide notes**

As stated before, the contractor must demarcate all environmental resources and install E and S controls prior to beginning any work.

**Notes**

**Slide 18 - Section 308.03**

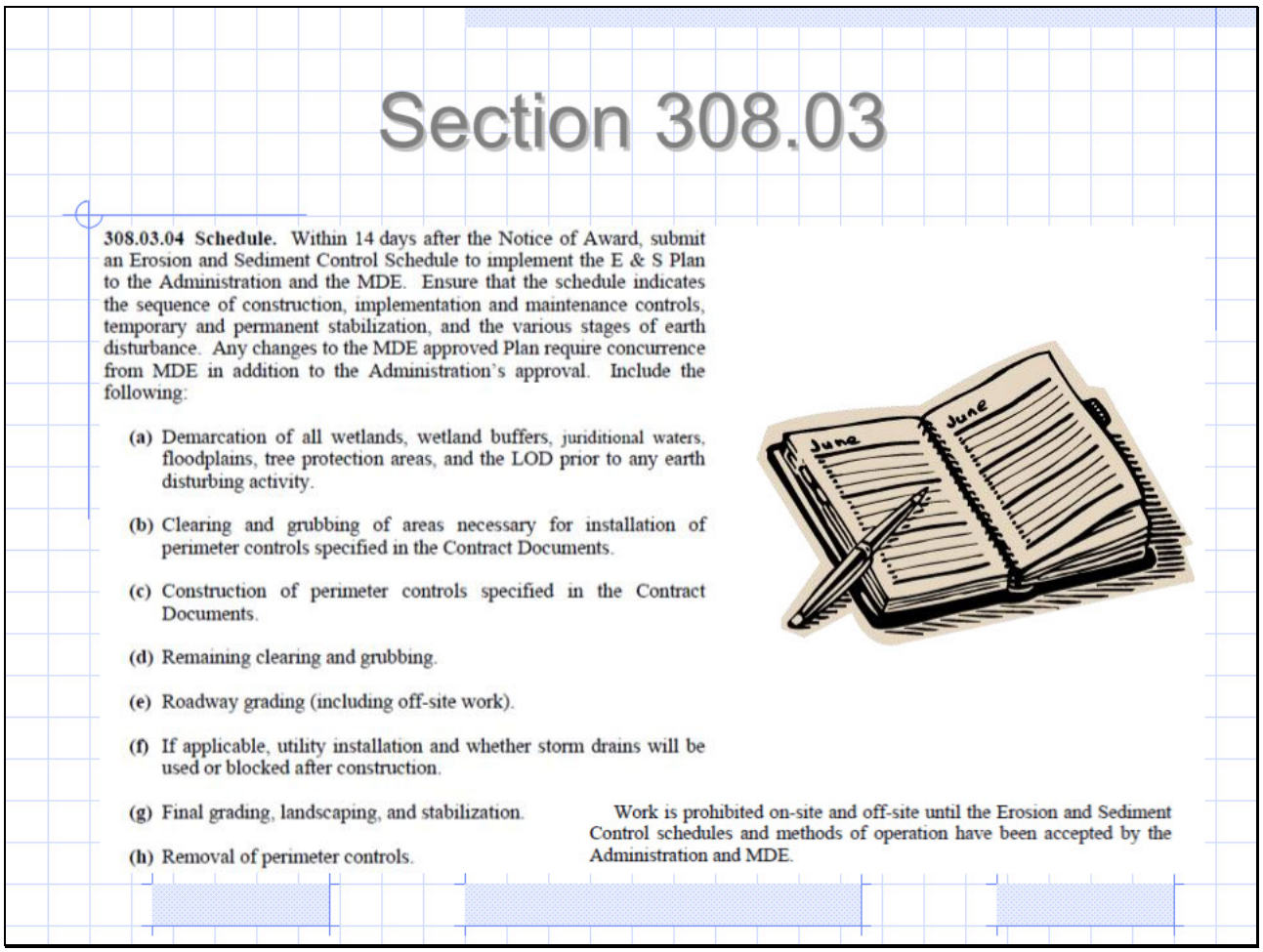



## Slide notes

As discussed in the organization part of this training a modification to the plan is possible. The proper information needs to be submitted and approved prior to proceeding with the work. Ensure that a reasonable timeframe is allowed for such modifications in order to not delay the work anymore than necessary. Specifications require a minimum of 2 weeks for a modification submittal.

## Notes

### Slide 19 - Section 308.03

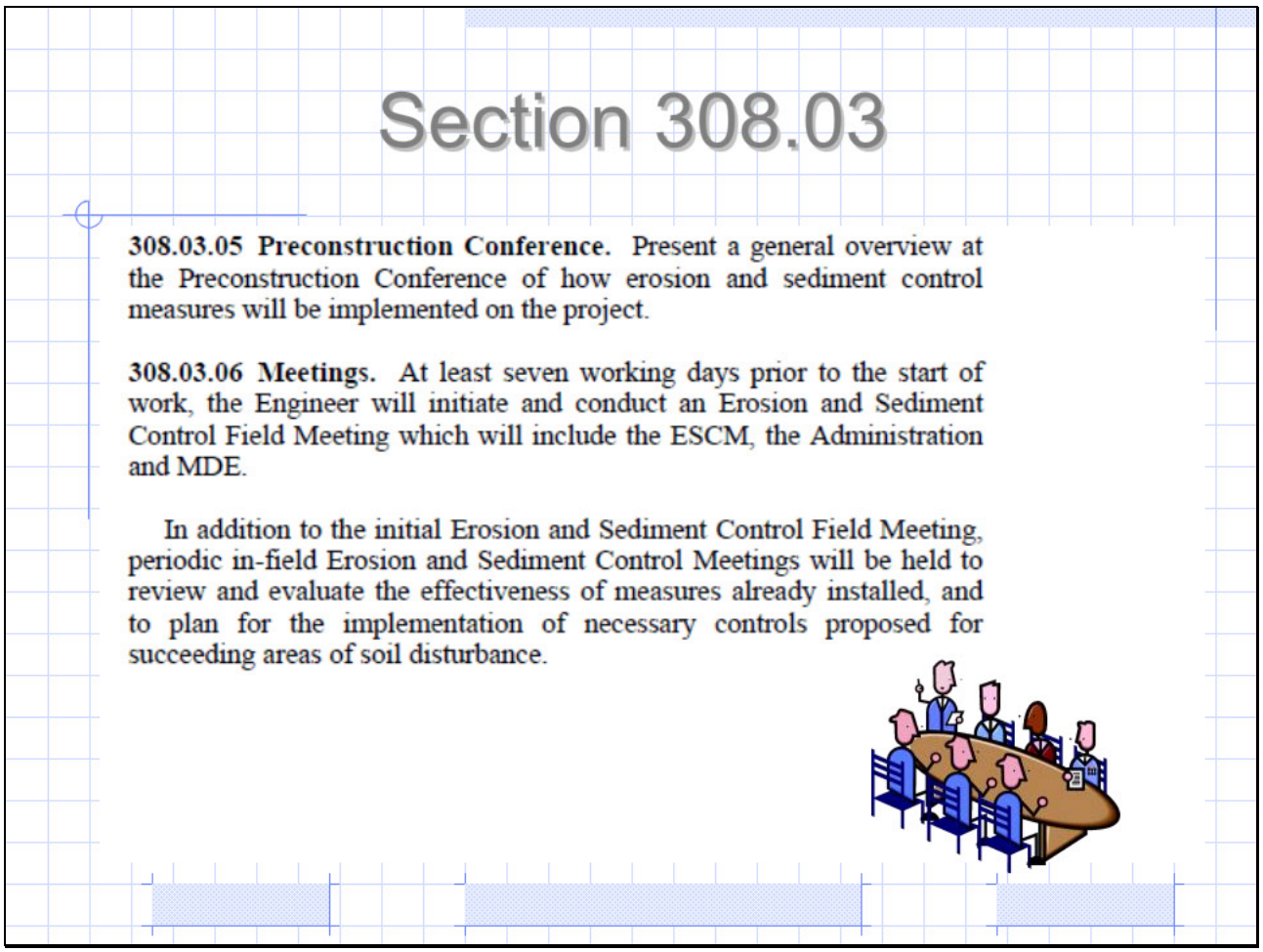



### Slide notes

The contractor must submit an erosion and sediment control schedule to implement the E and S plan, this is to be submitted to the administration within 14 days after the notice of award.

### Notes

**Slide 20 - Section 308.03**



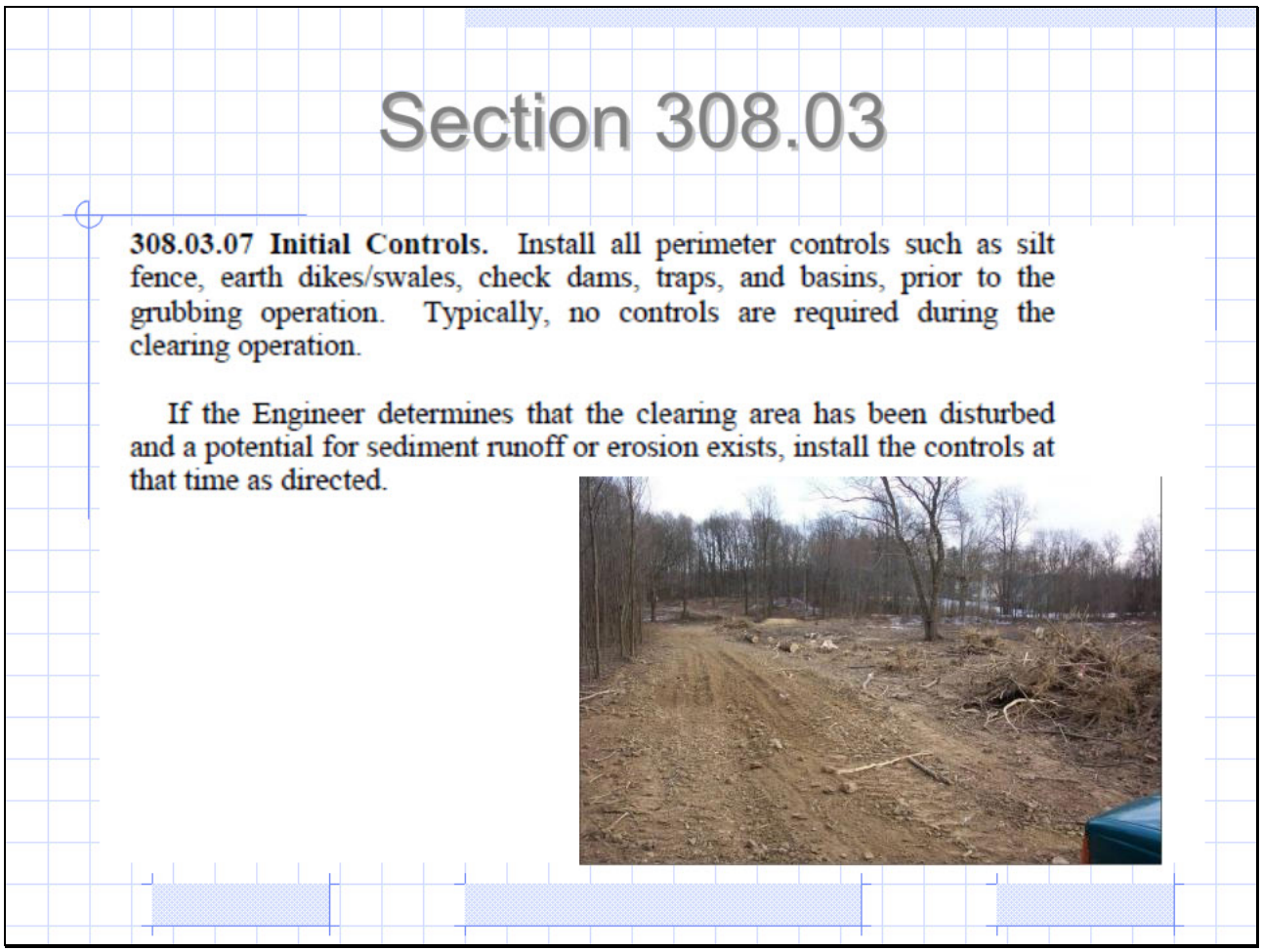

**Slide notes**

Meetings allow for the project stakeholders to look at specific contract language and interpretation for all parties to agree on. With changing environmental regulation and measurement, agenda flexibility and dedicated resources need to be considered. The Pre construction and a separate E and S control field meeting are required.

Routine meetings may be necessary throughout the life of the project depending on the scope of work and resources concerned.

**Notes**

**Slide 21 - Section 308.03**

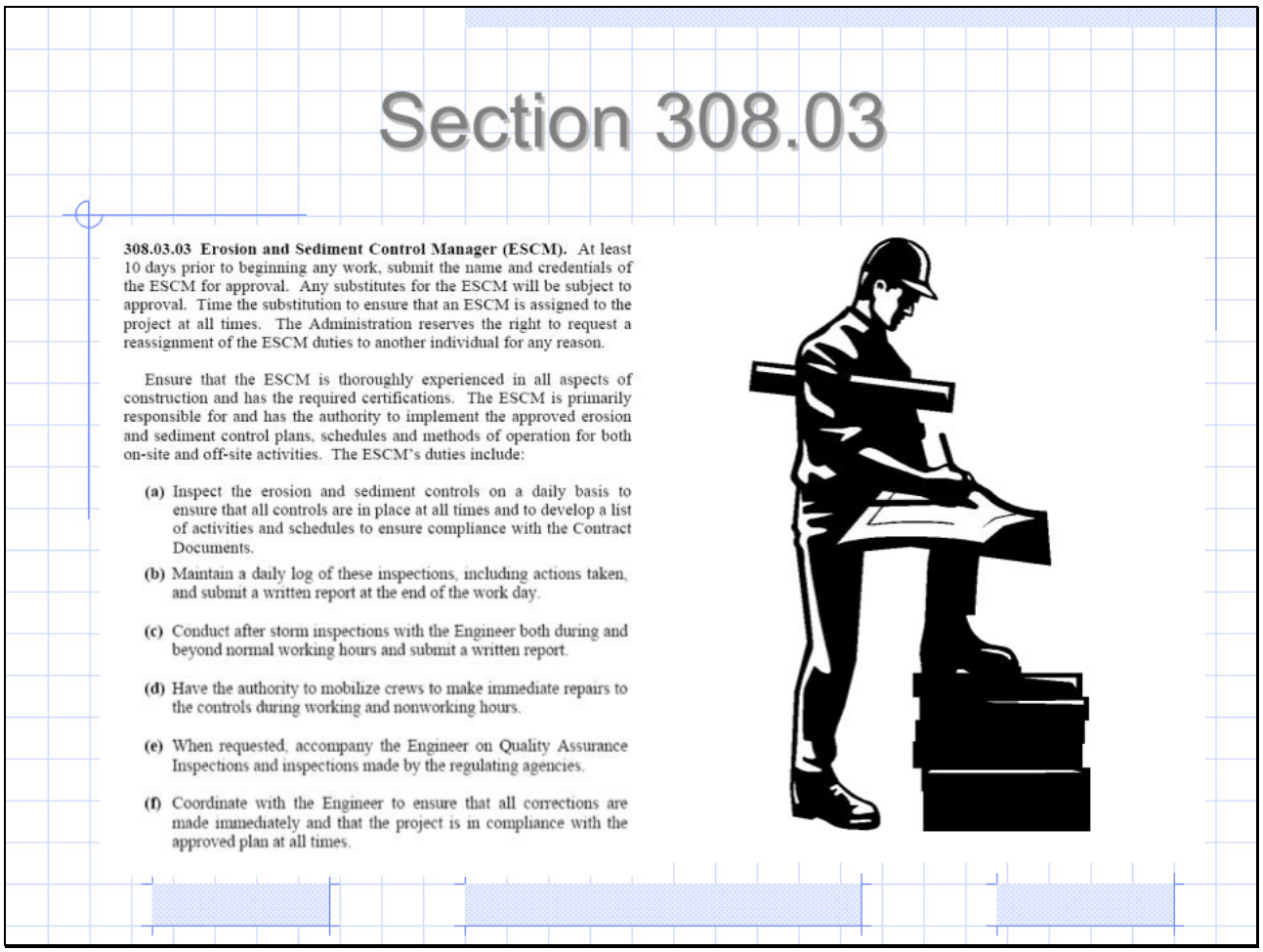



**Slide notes**

Install Perimeter Controls prior to grubbing. Ensure that, As stated earlier, when using heavy equipment to clear a site that the operation does not create so much disturbance as to be considered grubbing.

**Notes**

## Slide 22 - Section 308.03

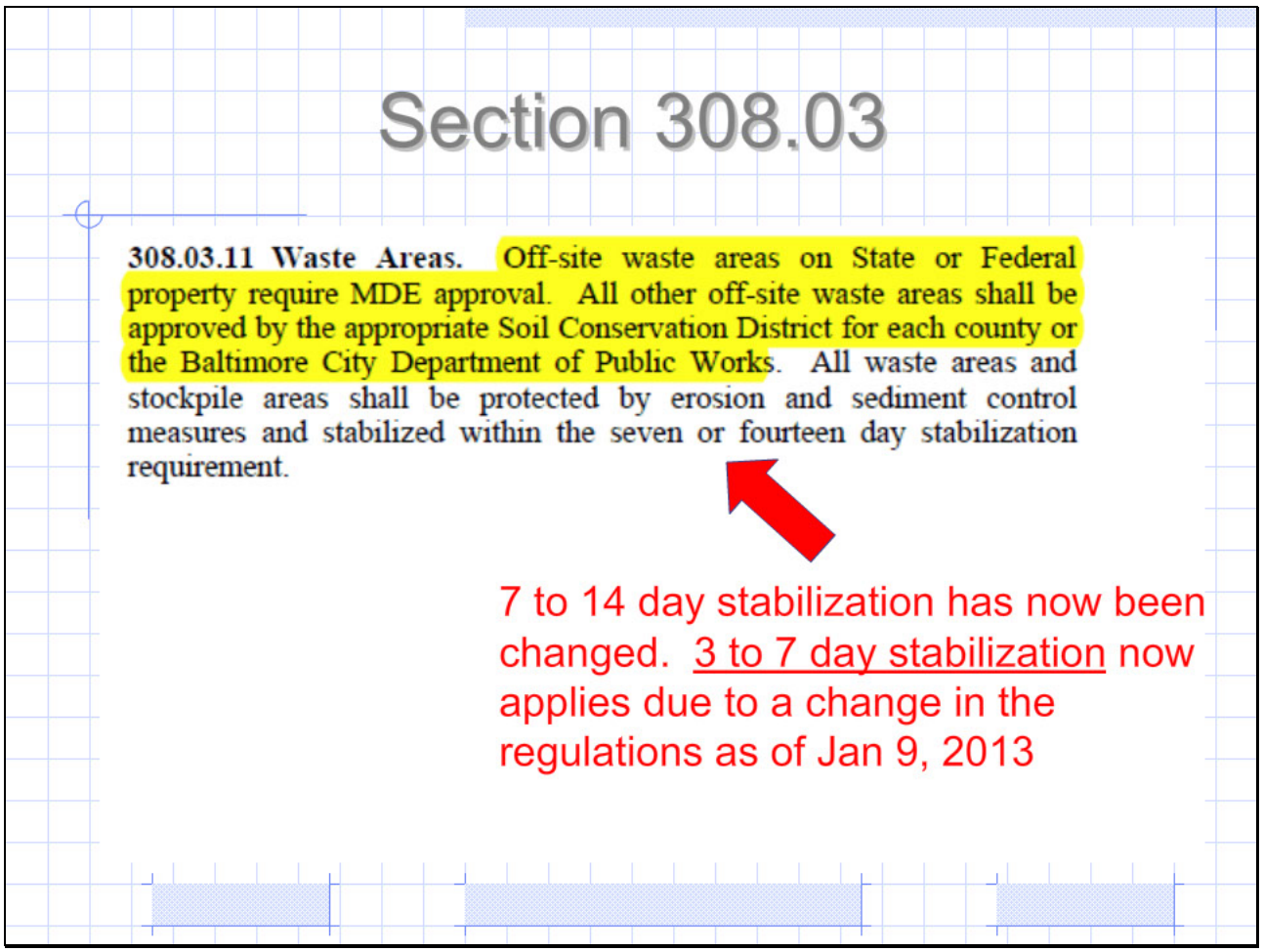



### Slide notes

Prior to beginning any work, The contractor must assign an employee as Erosion and Sediment Control Manager (ESCM). The ESCM has many responsibilities including reviewing the site daily to ensure proper E and S control maintenance along with documenting that review to submit to the project engineer. The ESCM's daily report is to be completed and given to the project engineer at the end of each work day.

### Notes

**Slide 23 - Section 308.03**



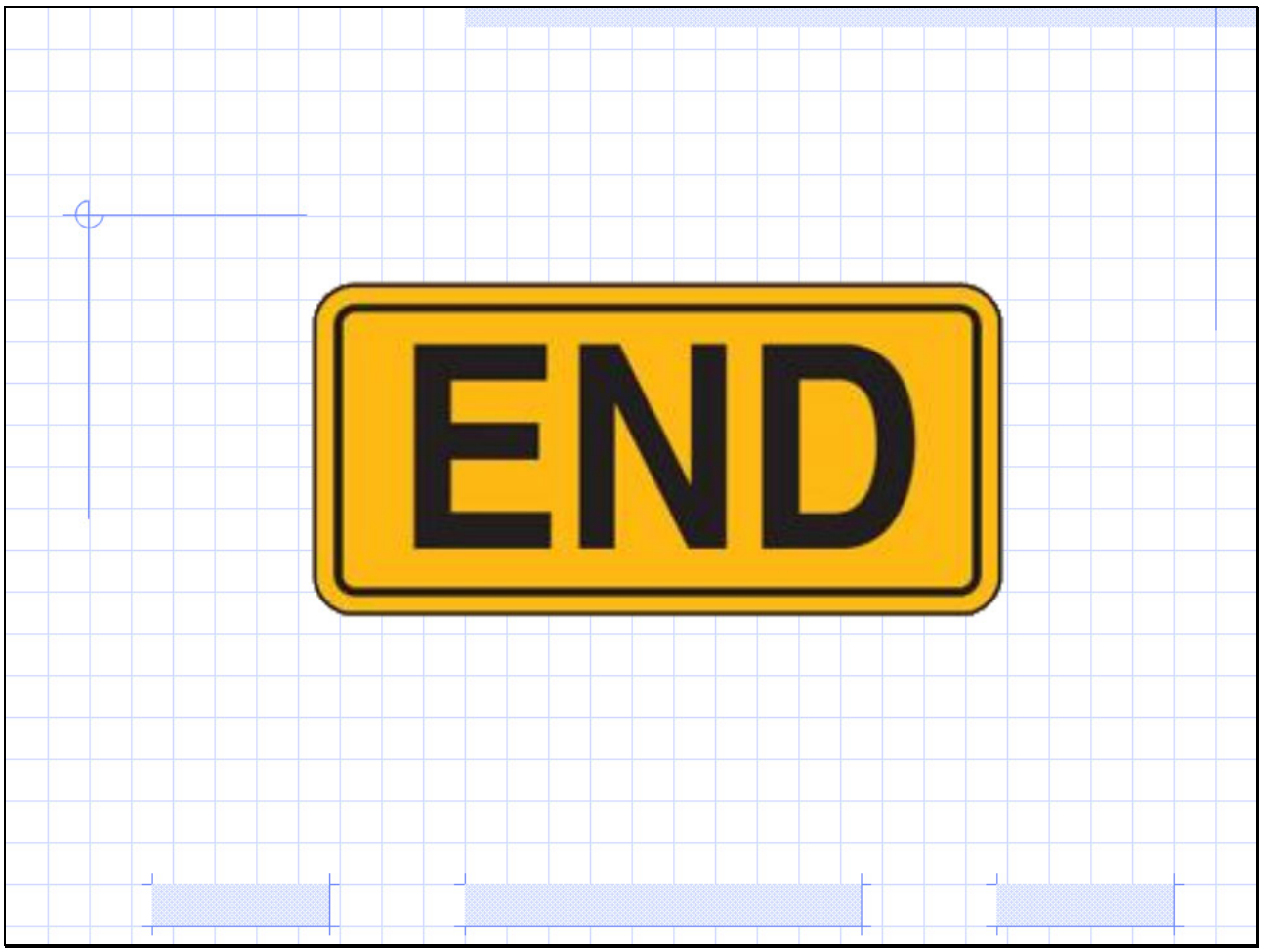

**Slide notes**

Off site waste areas must have permits or approvals, if you are unsure about what permits are necessary please contact your project engineer or regional environmental coordinator, QA representative.

Note the change in the stabilization specifications, this information will be discussed in the field guide portion of the training.

**Notes**

### Slide 24 - End




### Slide notes

This completes the specification portion of the Yellow Card certification. To continue with the training please select the next coarse module.

### Notes